

**NATIONAL SEMINAR ON DENTAL PUBLIC HEALTH ORGANIZED BY  
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**VALUE OF DENTIFRICE'S IN ORAL HYGIENE**

Dentifrices are means to keep the oral health in perfect manner. These are mechanical tools or aids to removing of materia alba, food-material, bacterial plaque. And it dilutes and washes away the soluble and loose debris in the mouth. Most of the dentifrices are used with a tooth brush, which provides: -

- a. Re-shaping of the gingiva.
- b. Massage of the gingival tissue.
- c. Whitening of the teeth.
- d. Removal of the local irritant and thus conducts:
  - (1) Reduction in the severity of the disease;
  - (2) Lessens the rapidity of the destruction;
  - (3) Prolongs the usefulness of the natural teeth

In brief, the proper use of dentifrices, after each meal controls the environments in the oral cavity, reduces the incidence of periodontal disorders and arrest the destructive sequelae. At the same time it controls the incidence of the dental decay. The use of tooth brush increases the keratinization and it improved the gingiva by mechanical stimulation and removes away the irritating food and other bacterial growths.

The value of the dentifrices is very high as it helps as an agent of public health programme.

Muhler observed in his book Current Therapy in Dentistry in Vol. III chapter 37 page 777 that 98% of people in United States suffer from dental caries. 39 millions Americans are without teeth. One out of every five needs denture at the age of 35. 250000 dentists are working to catch up and block up the dental decay. (Glickman 1967) observed that tooth loss due to periodontal disease becomes significant probably at the age of 35 years, but the disease starts in early days. By 15 years of age, 4 out of 5 persons have gingivitis

and out in 4 percent periodontal disease is already present. In a population of 111 millions adults, 20 millions would have lost all natural teeth, and periodontal disease must be present in 70% of the remainder. Because the periodontal disease is caused by local factor in absence of use of tooth brush.

Glickman further states that neglect in oral hygiene is the principal cause of gingival and periodontal diseases, for the neglect permits the health mouth to disease to occur. Other workers also have correlated poor hygiene and periodontal disease Green (1963) has discussed oral hygiene and periodontal disease. Lovdad, Scher, Waerhaug (1959) and (1961) have discussed the tooth brush and oral hygiene. Ash, Gitlin and smith (1964) have discussed correlation of plaque and gingivitis. Plaque consists of most parts of bacteria, scattering leucocytes, macro-phages and epithelia cells contained within amorphous ground substance matrix. Soft plaque is hardened by precipitation of calcium salts, and the calcification may start at the 2<sup>nd</sup> to 14<sup>th</sup> day of plaque formation and it varies from person to person. The calcification increase in size and coalesce to form the solid mass often with a laminated structure. The calcification entails the binding of the calcium ions to the carbonate proteins complex of organic matrix and precipitation of crystalline calcium phosphate salts. So the soft plaque forms the crystal i.e. the calculus and gingival disease gets advance. Similarly, the dental caries is caused by the food in absence of oral hygiene, oral bacteria act upon the carbohydrate part forming an acid. This acid and the dental plaque and susceptible tooth surface cause the dental decay. So the value of the dentifrice in oral hygiene becomes obvious. It is a tool in controlling the dental disease and it comes in the jurisdiction of dental health programme.

Dentifrices are tooth powders and tooth pastes- Each consists of four basic constituents:

- a. Abrasive material
- b. Detergent or cleansing agent
- c. An antiseptic
- d. Flavouring and colouring agents

Abrasives are the fine powers which assist mechanically scouring action of the tooth brush. One should see, that they should not injure the enamel cells though the hardest substance in the body.

Detergents are :

- a. Soap – which lowers the surface tension.
- b. Soluble alkalies – they dissolve the proteins.
- c. Peroxides – evolve the oxygen.

**Antiseptics**: help in controlling the bacterial growth, whereas flavouring, sweetening and colouring agents are added according to different companies. No paste or dentifrice is a medicine. It is meant to clean the teeth, removal of the bacterial plaque. The regularity of a person in oral hygiene, his interest in oral dental health and motivation by the State or private agency is the proper means. However, we have to see and suggest cheaper, easier dentifrices to our population which should be economical and according to our means of approach.

- a. **For rural population**: In rural areas if the diet is still hard and fibrous, simple miswak, datan or tooth brush with a solution of common salt and alum in equal parts is sufficient.
- b. After hard and fibrous food, use of vigorous flossing followed by salt gargles is sufficient.
- c. In Urban population, again tooth brush with common salt solution is all right.

There are certain antiseptic rinses like alkaline rinses, Amoson etc. Soft bathing soap in dilution form can be used as a means of dentifrices.

Never ever use Manjan, grinded coal, tooth powders, salt and oil as they have got more gritty abrasive matter which injure the surface of the enamel and after sometimes cells of enamel become sensitive to hot and cold drinks. Similarly, no toothpowders should be used, and never use the hard tooth brush, because it causes the erosion just like after use of soft drinks.

**Summary**:

- a. Oral Hygiene is a major measure of dental public health programme.
- b. Dentifrices are mechanical aids to keep the oral hygiene.
- c. Cheap means – can replace the costly tooth pastes of the market.

- d. Regularity is much more important than any other means of cleanliness. Before, I end, let me quote Quran and Hadis “God loves those who keep themselves clean”. Holy Prophet Muhammad (May Peace Be Upon Him) used to do the miswak before retiring to bed and early in the morning, in addition to five times in a day, with prayer. It is said that Holy Prophet Muhammad (Peace Be Upon Him) is the first Dental Health Educator in the world and had practiced all principles of good oral hygiene.

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**References:**

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